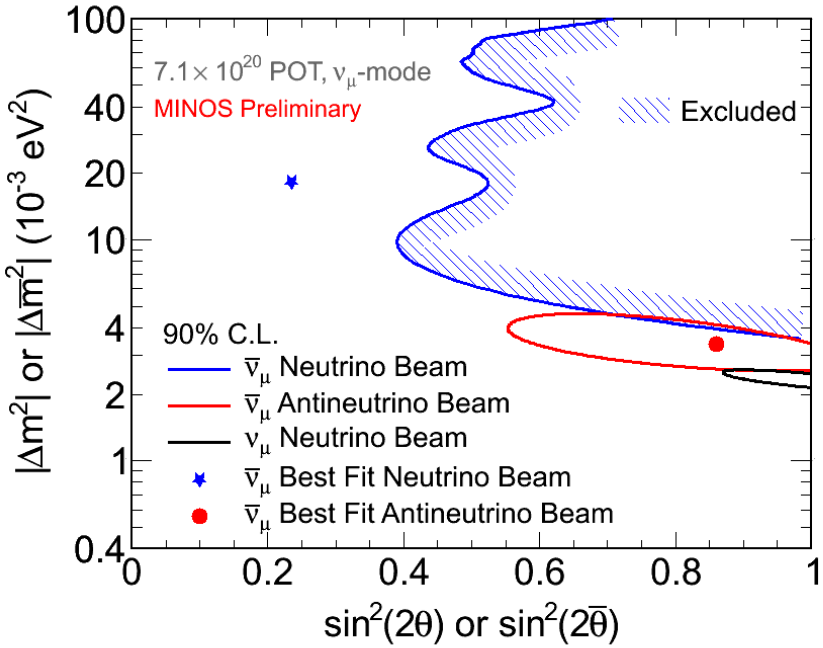
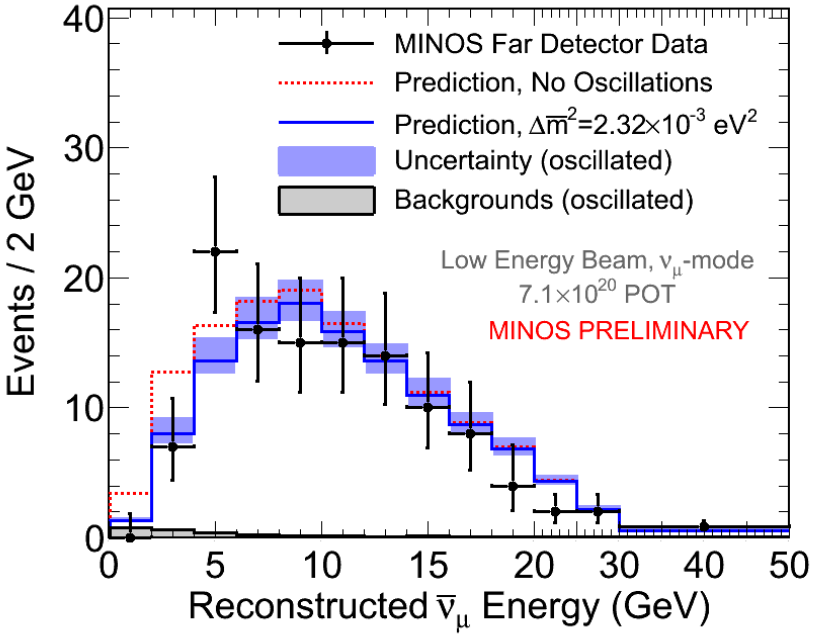
May 2011

MINOS Forward Horn Current Antineutrino Disappearance Results for the 7.1x10^{20} POT Data Set

MINOS has extracted a high-purity sample of muon antineutrino charged current events from the 7% $\bar{\nu}_\mu$ component of the NuMI neutrino beam.





- **150** Predicted for no oscillations
- **136** Predicted for oscillations
- **130** $\bar{\nu}_\mu$ events observed

Assuming maximal mixing, we constrain $\bar{\nu}_\mu$ oscillations to $|\Delta m^2| < 3.37 \times 10^{-3}$ eV^2 at 90% C.L.

Selection Results:

- 85% efficiency
- 98% purity